

## **REMARKS**

Claims 1-10 are pending and under consideration in the present application.

### **Examiner Interview Summary Record**

Applicants note in the file that an interview with the previous attorney of record, Marina E. Volin, and the Examiner was conducted on November 13, 2007. Applicants have not received any Examiner Interview Summary Record and are therefore unable to address the contents therein in this Amendment. Applicants respectfully request that the Examiner provide the undersigned a copy of the Examiner Interview Summary Record.

### **Information Disclosure Statement**

An Information Disclosure Statement was filed in the Application on October 26, 2007. Applicants would appreciate receiving an Examiner initialed copy of the Information Disclosure Statement as soon as possible.

### **Amendments to the Claims**

Applicants have amended claim 1 to recite “multiple.” Support for this amendment can be found throughout the specification, for example, at page 14, beginning line 12. Applicants have amended claim 10 to recite “for simultaneously depositing.” Support for this amendment can be found throughout the specification, for example, at page 14, beginning line 12. No new matter has been added by way of the present amendments.

### **Rejection of claims 1-10 under 35 USC § 102(e)**

The Examiner rejected claims 1-10 under 35 USC § 102(e) as anticipated by Teoh et al. (U.S. Patent No. 6,730,252; hereinafter “Teoh”). Specifically, the Examiner asserts that Teoh discloses a process for manufacturing complex parts and devices comprising utilizing a CAD environment to design a part or device to be created, converting the CAD designed part or device into a heterogeneous material and multi-part assembly model which can be used for multi-nozzle printing, and printing the designed part or device using different, specialized nozzles. Further, the Examiner asserts that Teoh discloses a multi-nozzle biopolymer deposition

apparatus comprising a data processing system which processes a designed scaffold model and converts it into a layered process tool path, a motion control system driven by the layered process tool path, and a material delivery system comprising multiple nozzles of different types and sizes which deposits specified hydrogels with different viscosities thereby constructing a scaffold from the designed scaffold model.

While not necessarily agreeing with the Examiner's reasoning, but rather in a good faith effort to expedite prosecution of the present application, Applicants have amended claim 1, from which claims 2-9 depend, to recite "multiple." Moreover, while not necessarily agreeing with the Examiner's reasoning, but rather in a good faith effort to expedite prosecution of the present application, Applicants have amended claim 10 to recite "for simultaneously depositing." The present amendments are supported throughout the specification as filed, for example, at page 14, beginning line 12.

Applicants respectfully submit that Teoh does not anticipate presently amended claims 1-10 of invention for the following reasons. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (quoting *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Id.* (quoting *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added)). Therefore, Teoh must describe each and every element of the rejected claims in order to anticipate this claim under 35 U.S.C. §102(e). This reference does not satisfy this requirement.

Teoh does not anticipate presently amended claims 1, 10, or claims 2-9 which depend from claim 1. Teoh does not disclose or contemplate a "*multi-nozzle* biopolymer deposition apparatus . . . comprising multiple nozzles of different types and sizes for simultaneously depositing." (*emphasis added*) Similarly, Teoh does not disclose or contemplate a process involving "*multi-nozzle* printing; and (c) printing the designed part or device using multiple, different, specialized nozzles." (*emphasis added*)

The Examiner cites Teoh at column 4, lines 54-57 and column 10, Table 1, to support the Examiner's assertion that Teoh discloses an apparatus and a process which uses "more than one nozzle" (present office action, page 2). Applicants respectfully submit that this

interpretation of Teoh is incorrect. At column 4, lines 54-57, cited by Examiner, Teoh discusses, in its Background section, a method known as 3DP and states, in the singular, that the 3DP “technology is based on the printing of a binder through a print head nozzle” (*emphasis* added). Nothing in Teoh’s description of 3DP discloses or contemplates the use of multi-nozzle or multiple, different, specialized nozzles. Moreover, at column 10, Table 1, cited by Examiner, Teoh provides a table which discloses that the print nozzle of the invention of Teoh may be a nozzle having a size ranging between “0.010 and 0.016” inches. Applicants respectfully submit that column 10, Table 1 discloses only that the nozzle of Teoh may be of any size ranging between 0.010 and 0.016 inches, but that Teoh does not disclose or contemplate that the invention of Teoh could utilize more than one of these differently size nozzles at any one time. Applicants further submit that Teoh uses the term nozzle elsewhere in the disclosure and consistently uses the term nozzle in the singular, indicating that only one nozzle is used at any one time. (See, for example, column 5, beginning line 27; column 8, beginning line 48, describing Figure 2; column 10, beginning line 43). Nowhere in Teoh is it disclosed or contemplated that more than one nozzle is employed in the apparatus and process disclosed by Teoh at any one time and thus, Teoh cannot anticipate presently amended claims 1, 10, or claims 2-9 which depend from claim 1.

In light of the present amendments and arguments, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-10 under 35 U.S.C. § 102(e).

**Summary**

Applicants respectfully submit that the amendments made to the claims and the specification herein do not introduce new matter, and that the arguments set forth herein evidence that the pending claims are in full condition for allowance. Accordingly, favorable examination of the claims is respectfully requested at the earliest possible time.

Respectfully submitted,

**WEI SUN, *ET AL.***

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KATHRYN DOYLE, Ph.D., J.D.  
Registration No. 36,317  
DRINKER, BIDDLE & REATH, LLP  
One Logan Square  
18th and Cherry Streets  
Philadelphia, PA 19103-6996  
Telephone: (215) 988-2700  
Direct Dial: (215) 988-2902  
Facsimile: (215) 988-2757  
E-Mail: Kathryn.Doyle@dbr.com  
Attorney for Applicants